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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/739,836	12/20/2000	Georges Bettan	Q62386	3881

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EXAMINER

JAMAL, ALEXANDER

ART UNIT	PAPER NUMBER
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2643

DATE MAILED: 04/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/739,836

Applicant(s)

BETTAN, GEORGES

Examiner

Alexander Jamal

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1-17** rejected under 35 U.S.C. 103(a) as being unpatentable over Danilo et al (WO9410808), and further in view of Warner et al. (5323460).

Consider **claim 1**, Danilo discloses a telecommunications device (for use in a telephone system) for converting dial pulsed digits into DTMF signals (ABSTRACT) comprising Loop current detection means (Page 4 lines 1-35, Page 6 lines 1-17). Once the dial pulses are detected a logic signal is generated. The device is installed at a central office and is connected in parallel (ie. across tip and ring) with subscriber lines (Page 1 lines 13-22). The device may also service either a single port or plural ports (ie. a plurality of loop current detection means) (Page 2 line 18-21).

Danilo's device further comprises A PLSI unit (the pulse processor implemented with a microcontroller) (Page 5 line 21 to Page 6 line 10) that accepts the logic signals from the loop current detection means. The pulse processor sends signaling to a DSP unit (DTMF generator) (Page 6 lines 11-19) and the code signals are converted into DTMF signals. The DTMF emitter inherently comprises a line injection unit to couples the DTMF signal to the phone line (Page 6

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lines 20-25). The DTMF generator and emitter inherently comprise a digital to analog converter for the purpose of transforming the digital signals (digital signals are inherent by definition to the microcontroller based system) into analog signals that may be coupled to the telephone line.

However, Danilo does not specify monitoring the loop current data from multiple loops in parallel and converting all the parallel signals to a serial stream.

Warner teaches a central office configuration with multiple ports 3,4 (Fig. 1, Col 4 line 49 to Col 5 line 30) that are monitored by analog facility interface units 30,40. The parallel data streams are converted into a serial stream on the PCM bus in Fig. 1. The serial data stream is processed by switching network 10 and peripheral processor 20. It would have been obvious to one of ordinary skill in the art at the time of this application that, in a multiple-port implementation, Danilo's could have monitored the multiple subscriber lines in parallel and then converted that data into a serial stream (such as time division multiplexing on a PCM highway) for the advantage that a separate processing unit will not have to be implemented for each separate port (save cost).

Consider **claim 8**, the device disclosed in claim 1 will perform the steps listed in this method claim.

Consider **claim 10**, Danilo discloses all elements of claim 10 in the same manner as claim 1. Claim 10 claims a device that monitors current and converts dial pulsed digits at the subscriber end, whereas claim 1 monitors/converts at the CO end. Both the CO and subscriber end refer to the device being coupled on the subscriber side of the loop (as in applicant's Fig. 1).

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As Danilo's device is also located on the subscriber loop, the device could either be located on the subscriber end or CO end of the loop. In the case where there is negligible loop impedance (for short loops) then the CO and Subscriber end both refer to the same point.

Consider **claims 2,9,11,17** the pulse dialed digits of Danilo's device are overdialed pulse digits (Page 1 lines 17-29).

Consider **claims 3,12**, Danilo's loop current detection means do not cause significant insertion loss (Page 2 lines 22-23). As such they are inherently high impedance for the purpose of not causing said loss.

Consider **claims 4,13**, Danilo's loop current detection means generate a one bit signal (the conversion of the dialed pulses to logic voltage levels) when loop current is detected (Page 4 lines 1-5).

Consider **claim 5**, Danilo's device comprises a microprocessor (Page 6 lines 1-10).

Consider **claims 6,7** Danilo's device comprises a network interface (the subscriber line) and a communication port interface (page 7 line 31 to page 8 line 4).

Consider **claim 14**, Danilo's device comprises a standard microcontroller setup (Page 6 lines 1-10) with RAM and ROM. The microcontroller setup inherently uses address and data

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lines for the purpose of programming and communicating with all associated circuitry (such as the DAC).

Consider **claim 15**, Danilo's device couples to a subscriber loop near a feeding loop circuit (DANILO: page 1 lines 13-29). The wireless telephone network described by the applicant (SPECIFICATION: Fig. 4) would inherently comprise a feeding loop circuit for the purpose of supplying the telephones with power (and allowing the current-sense method of detecting dial-pulse signals). As such, Danilo's device may work in a wireless system (the wireless system as defined by the applicant).

Consider **claim 16**, the device disclosed in claim 10 will perform the steps listed in this method claim. Additionally, Danilo discloses the step of detecting the delays between the pulses (page 5 line 21 to page 6 line 10).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Jamal whose telephone number is 703-305-3433. The examiner can normally be reached on M-F 8AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis A Kuntz can be reached on 703-305-4708. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9315 for After Final communications.

  
CURTIS KUNTZ  
SUPERVISORY PATENT EXAMINER  
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